

- II. "The Electrical Effects of Light upon Green Leaves. (Preliminary Communication.)" By A. D. WALLER, M.D., F.R.S.
 - III. "The Nature and Origin of the Poison of Egyptian Lotus (*Lotus arabicus*)." By W. R. DUNSTAN, F.R.S., and T. A. HENRY.
 - IV. "The Exact Histological Localisation of the Visual Area of the Human Cerebral Cortex." By Dr. J. S. BOLTON. Communicated by Dr. MOTT, F.R.S.
 - V. "Data for the Problem of Evolution in Man. V.—On the Correlation between Duration of Life and the Number of Offspring." By Miss M. BEETON, G. U. YULE, and K. PEARSON, F.R.S.
 - VI. "The Diffusion of Ions produced in Air by the Action of a Radio-active Substance, Ultra-violet Light, and Point Discharges." By J. S. TOWNSEND. Communicated by Professor J. J. THOMSON, F.R.S.
 - VII. "On an Artificial Retina, and on a Theory of Vision." By Professor J. CHUNDER BOSE, F.R.S. Communicated by LORD RAYLEIGH, F.R.S.
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"On the Periodicity in the Electric *Touch* of Chemical Elements. Preliminary Notice." By JAGADIS CHUNDER BOSE, M.A., D.Sc., Professor of Physical Science, Presidency College, Calcutta. Communicated by LORD RAYLEIGH, F.R.S. Received December 6, 1899,—Read January 25, 1900.

In my previous communication* an account was given of the contact sensitiveness of elementary substances to electric radiation. It was shown that though many substances exhibit a diminution of contact resistance, there are others, of which potassium may be taken as an example, which show an increase of resistance—an increase which, in some cases, lasts during the impact of electric waves, the sensitive element quickly recovering on the cessation of radiation. There are thus produced two opposite effects, which depend on the nature of sensitive substance.

As the normal action of radiation is to produce opposite effects on the two classes of substances, it would be advisable, in order to avoid confusion, to use a simple term to indicate these actions, and to distinguish them from one another, by calling the one positive and the other negative. The sensitiveness is found confined to the outer surfaces in contact, and not extended to the substratum; I have there-

* "On a Self-recovering Coherer, and the Study of Cohering Action of different Metals," 'Roy. Soc. Proc.,' vol. 65.